

REMARKS

These remarks are presented in response to the Office Action dated February 18, 2010, wherein claims 1-8 and 11-27 were pending and at issue. By the foregoing amendments, claims 1, 2, 5, and 12 have been amended, claims 3, 4, 7, 9 and 10 were canceled, and claims 28-31 have been added. Herein, claims 1, 2, 5, 6, 8 and 11-31 are at issue.

The amendment to the specification is supported by original claim 14, attached to the IPER, claim 23 herein.

The amendment to claim 1 is supported by the specification at ¶[0004] and ¶¶[0016]-[0017] of the published patent application 2007/0068342 A1, and by claim 1 of the patent claims as attached to the IPER. The amendment to claim 2 combines the features of previously presented claims 2-4 and 7, and is supported by the disclosure, for example, at ¶¶[0012]-[0014]. Amendments to claim 5 remove the alkali earth and alkali earth metals from those recited. The amendment to claim 12 is presented to clearly represent the claim as a process, is consistent with the meaning of the previously presented claim, and is supported throughout the specification, for example, at ¶¶[0018]-[0021].

New claim 28 is supported by the specification, for example, at ¶¶[0017] and [0021]. At the examiner's suggestion, new claims 29-31 are presented and include the distinguishing features of previously presented claims 6, 22 and 23. Specifically, new claim 29 combines features from previously presented claims 1 and 6; new claim 30 combines features from previously presented claims 12 and 22; new claim 31 combines features from previously presented claims 12 and 23.

No new matter has been presented. Reconsideration is respectfully requested in view of the accompanying amendments and the following remarks.

Claim Rejections – 35 USC § 103

Regarding the rejection of Claims 1, 4, 5, 8, 11 and 12

The applicants respectfully traverse the rejection of claims 1, 4, 5, 8, 11 and 12 as obvious over Minoura et al. (JP pub. No. 10-092422). As-amended, claim 1 overcomes the examiner's thorough reading of Minoura and rejection because Minoura does not teach a homogeneous distribution of the metal and the catalyzing agent. Minoura teaches a specific process where the metal is subjected to "machinery grinding", is then mixed with a calcium carbonate powder, *and* mixed with a binder, after which the mixture was kneaded into a paste. Minoura ¶[0007]. One of ordinary skill in the art would recognize the material manufactured by the process in Minoura as a heterogeneous product.

Moreover, one of ordinary skill could not have interpreted Minoura's results as suggesting that calcium carbonate is a catalyzing agent. Minoura specifically teaches that calcium carbonate is provided to suppress oxygen evolution by increasing the electropositive potential for the oxygen evolution. Minoura ¶[0005]. As such, the addition of calcium carbonate would be understood to suppress the reactivity of the metal not function as a catalyzing agent.

Regarding the rejection of Claims 1-5 and 7-11

The applicants respectfully traverse the rejection of claims 1-5 and 7-11 as obvious over Ogura et al. (U.S. Pat. 6,171,727). As discussed above regarding Minoura, as-amended, claim 1 overcomes the examiner's rejection because Ogura does not teach a homogeneous distribution of the metal and the catalyzing agent. As Ogura shows in Figure 1, the "surface of the hydrogen storing alloy **102** is coated with basic carbonates **103**." Ogura, col. 6, lines 35-39. Clearly, the coated hydrogen storing alloy in Ogura is distinct from the homogenous material recited in as-amended claim 1. Moreover, the size distribution of the materials in Ogura clearly illustrate a heterogeneous material where the carbonate has a size of about 0.1 to 5 μm and the alloy has a size of about 74 μm . Ogura, col. 4, lines 49-50; col. 6, lines 50-51. Moreover, the motivation in Ogura is similar to that in Minoura, namely stabilizing a battery against overcharging. Ogura, col. 4, lines 6-11.

Regarding the rejection of Claims 1, 12-21 and 24-27

The applicants respectfully traverse the rejection of claims 1, 12-21 and 24-27 as obvious over Klassen et al (U.S. Pat. 6,752,881) in view of Minoura. As discussed above, Minoura fails to teach necessary features of the claims and as such the process taught by Klassen for the preparation of materials that includes metal oxides, *not* metal carbonates, cannot correct these deficiencies. For example, Klassen teaches the preparation of metal oxides on the surface of the hydrogen absorbing metal. Klassen, col. 2, lines 24-27. Moreover, one of ordinary skill would not have been motivated to modified the teachings of Klassen with the teachings of Minoura because the two references are seeking to solve separate and distinct problems. Minoura, as noted above, teaches solutions to problems associated with recyclable batteries loosing their overall charge capacity with repetitive charge and discharge. Minoura, ¶[0003]. Minoura further teaches that with the addition of the calcium carbonate this service capacity can be maintained. Minoura ¶[0004]. On the other hand, Klassen teaches solutions to problems associated with the discharge rate for an electrochemical cell wherein the addition of a catalytic amount of a metal oxide improves the discharge rate. See Klassen col. 2, lines 7-13; col. 4., lines 22-25.

As noted by the examiner, previously presented claims 6, 22 and 23 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims have been rewritten and are herein presented as new claims 29-31, respectively. Therefore the applicants respectfully request the removal of the objection to form.

Application No. 10/568,690
Amendment dated May 12, 2010
Reply to Office Action of February 18, 2010

Docket No.: 30572/41855

In view of the foregoing, it is believed that the above-identified application is in condition for allowance. In the event there is any remaining issues that the examiner believes can be resolved by telephone, the examiner is respectfully invited to contact the undersigned attorney at (312) 474-6300.

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Respectfully submitted,

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